

METHOD OF MANUFACTURING AND STRUCTURE OF  
SEMICONDUCTOR DEVICE WITH FLOATING RING STRUCTURE

ABSTRACT

5           A high voltage semiconductor device includes a drain  
region disposed within a semiconductor substrate. The  
semiconductor device further includes a field oxide layer  
disposed outwardly from the drain region of the  
semiconductor substrate. The semiconductor device also  
10 includes a floating ring structure disposed inwardly from  
at least a portion of the field oxide layer. In one  
particular embodiment, a device parameter degradation  
associated with the semiconductor device comprises one  
(1) percent or less after approximately five hundred  
15 (500) seconds of accelerated lifetime operation.